

# PEDIATRIC REVIEW

CHILDREN'S HOSPITAL • NEW ORLEANS

MARCH 2013 • VOL. XXVII, ISSUE 2

## Pediatric Habits: A Dental Perspective



By **Janice Townsend, D.D.S.**, pediatric dentist at Children's Hospital and interim head & assistant professor of pediatric dentistry at LSU Health Sciences Center School of Dentistry.

*This issue of Pediatric Review is intended for pediatricians, family physicians and all other interested medical professionals. For CME purposes, the author has no relevant financial relationships to disclose.*

### OBJECTIVES

At the end of this activity, the participant should be able to:

1. Discuss the incidence and primary risk factors of children with nonnutritive sucking habits
2. Describe the causes of malocclusion and strategies to end nonnutritive sucking habits
3. Describe proper course for parents to ensure their child's oral health

### INTRODUCTION

Oral habits, particularly nonnutritive sucking habits, in children are often a source of concern to parents. This article will review the dental implications of these common childhood oral habits. The medical professional and dentist can work together to inform parents of the dental sequella of habits, and to decrease or eliminate habits at the appropriate time to prevent potential adverse effects.

### NONNUTRITIVE SUCKING HABITS

Nonnutritive sucking habits are normal in infants and very young children. It is not uncommon for habits to persist longer than 36 months where they can be associated with deleterious effects on the primary dentition that may persist into the permanent dentition. In a large prospective study looking at oral habits in healthy children, 20% of the cohort had nonnutritive habits (both pacifier and digit habits) persisting beyond 36 months. Factors associated with the prolonged habit were older maternal age, increased maternal education and no older siblings.

Parents were traditionally advised that if a pacifier or digit habit was stopped before the eruption of the permanent anterior teeth there would be no ill effect. However, it has been confirmed that habits ceased late in the primary dentition, but before the permanent teeth erupted, in children ages 3 – 5 years old had negative effects on the permanent teeth. The prevalence of these negative effects, or malocclusion, increased with the duration of the nonnutritive habit.

In order to understand the dental effects of nonnutritive habits it may help the medical professional to learn a few dental terms to describe occlusion as follows:

*Malocclusion* – deviation from the ideal occlusion

*Overbite* – the vertical overlap between the maxillary or upper anterior teeth and the mandibular or lower anterior teeth. Typically the normal bite has anywhere from 10% – 50% overbite.

*Overjet* – the horizontal distance between the maxillary and mandibular anterior teeth typically measured in millimeters. Generally 1 – 2 mm of overjet is normal in the primary dentition and 1 – 3 mm is normal in the permanent dentition.

*Anterior openbite* – the lack of vertical overlap of the maxillary and mandibular anterior teeth when the posterior teeth (or molars) are in contact.

*Maxillary constriction* – a condition where the maxillary arch is the same size or smaller than the mandibular arch. This may result in the teeth occluding in an abnormal way called a cross-bite and it may cause the mandibular jaw to shift in closing to accommodate this constriction.

*Class II malocclusion* – a condition where the mandible is abnormally posterior to the maxilla. It can result in increased overjet and an unfavorable facial profile with a retruded chin.

The effect of the nonnutritive habit is specific to the individual. It is determined by the duration of the habit (how long the habit takes place each day and how long the habit persists), the force or intensity of the habit, and, in the case of thumb and finger habits, the positioning of the digit in the mouth. For example, a child that rests a thumb between their teeth will not show the same dentoalveolar signs as the child that intensely sucks their thumb. Nonnutritive sucking habits can contribute to anterior openbites because the pacifier or digit stops the anterior teeth from erupting while the posterior teeth can continue to erupt. If a habit is of sufficient frequency and duration it can result in increased overjet, reduced overbite/anterior openbite, posterior cross bite and a long facial height. Anterior open bite and posterior crossbite are found significantly more often in children with a longer duration of sucking. Nonnutritive habits that persist for greater than five years are generally associated with excessive overjet and Class II malocclusion.

Malocclusions are common among children and they often require lengthy and expensive treatment. Once a malocclusion is established in mixed dentition an appliance or full braces are needed to correct it. Certain conditions such as a severe anterior



*Figure 1: Open bite malocclusion in the permanent dentition*



*Figure 2: Habit appliance. Note that the left band of the appliance is no longer cemented and has been distorted by biting. The appliance also appears to be impinging on the soft tissue of the palate.*



*Figure 3: Overjet*

Photos by: Dr. Robert Musselman

openbite may need orthognathic surgery to correct. Treatment is recommended for esthetics primarily but may have functional consequences. Excessive overjet is associated with increased traumatic injury to the anterior teeth and maxillary constriction may cause crowding of the teeth. There is a possible association between posterior crossbite with a mandibular deviation and temporomandibular disorder. Although the etiology of malocclusion is multifactorial, it is probably a combination of genetics and environment, nonnutritive habits are a known cause of malocclusion that can be modified.

## DIGIT HABITS

Digit habit is the repetitive sucking of a digit — it can be either one finger or multiple fingers but it is most commonly the thumb. Dentoalveolar effects of thumb and finger are very specific to the position of the finger in the mouth. For example if the thumb is placed lingual to the maxillary incisors and pressure is applied then the incisors will move anteriorly or protrusively resulting in an increased overjet. A digit habit persisting beyond 60 months is significantly associated with an anterior open bite.

Digit habits can also cause maxillary constriction and posterior crossbite. One theory for the relationship between a thumb habit and maxillary arch constriction is related to the change in oromusculature balance then the thumb is introduced. When the thumb is contacting the palate the tongue is moved down to the floor of the mouth. The force of the orbicularis oris and buccinators muscles sucking the thumb constricts the maxillary arch and the tongue is not present to counterbalance it. As a result the posterior maxillary arch collapses and a cross bite malocclusion may ensue.

Digit habits tend to persist longer than pacifier habits — in a study investigating nonnutritive habits, digit habits persisted for a significantly longer duration (33 months) compared to pacifier habit (14 months).

Cessation of the digit habit is more difficult than the pacifier habit for obvious reasons. Parents should be advised that digit habits should stop before 36 months. When counseling

parents on habit cessation it is important to keep in mind the child's maturity level and ability to understand the habit. It is also prudent to evaluate psychosocial stresses in the child's life — if the child is going through a big change it may be better to defer cessation until their environment is more stable. If either the parent or the child do not want to engage in habit cessation it should not be attempted.

Breaking any habit is difficult and the best approach is a positive one with praise and rewards. Parents should be counseled that negative comments or nagging may backfire. A negative approach may introduce more tension into the child's life encouraging them to self-soothe with the habit. More commonly, the attention — even though negative — is a reward for the child and it may encourage them to more openly engage in the habit or other immature behavior. It is better to disregard the habit and reward positive behavior instead. A parent may see their child sucking the thumb and, instead of telling them to stop, they may ask them to do a task such as hold something that will distract them and remove the thumb. This requires incredible restraint of the parent but a positive approach can encourage habit cessation at minimal financial cost and stress to the child.

Overall formal habit cessation falls into one of four categories: counseling, reward, reminder or adjunctive therapy. Counseling is appropriate for any medical professional. It is a frank, developmentally appropriate conversation where the child is informed in a compassionate, shame-free way that it is time to end the habit because it is bad for them. As opposed to parental nagging this is information coming from an authority figure that may influence the child.

The reward system is most appropriate for preschool children who would like to quit a habit and can be used for children of all ages. Typically some type of record is kept of the days that the child does not suck their thumb — often on a calendar. Goals are set by the parents and the child and if the child reaches their goal they are rewarded. The reward may be tangible, such as a toy, or it may be social, such as a movie night or sleep over. The effectiveness of this method is often underrated

by parents but in an encouraging environment a thumb habit can be discontinued in weeks. However, it does require the most parental involvement and support.

Reminder therapy can be beneficial for the preschool child that is capable of understanding the habit and has the desire to stop. These reminders are typically a type of physical barrier for the digit to remind the child not to suck. A mitten can be worn by the child during times they are prone to digit sucking such as watching television or falling asleep. A plastic thumb guard can be worn over the thumb — these are more costly, but are less likely to be inadvertently removed. An athletic bandage snugly wrapped around the elbow has been advocated as a reminder for sleep — it makes it difficult for the child to bend the elbow to suck the thumb and as they fall asleep, their arm straightens and removes the thumb. Finally a bitter substance can be applied to the digit or digit nail to remind them to stop, although this technique seems to produce little success. All of these methods must be introduced as a reminder to help the child, not as a punishment, and should be accompanied by praise and reward.

In the school-age child that has not had success with rewards or reminders, adjunctive therapy may be appropriate. Before starting therapy it is important to evaluate why previous attempts have failed. The habit should be carefully assessed to ensure that it has the potential to cause dental harm. Adjunctive therapy typically takes the form of an intraoral device to act as a reminder for the child to stop the digit habit. These are typically fixed appliances, or appliances that are cemented and cannot be removed, and the shape and design vary from dentist to dentist. They are usually made from stainless steel wire and attached to the mouth through cemented bands. They may have bars across the top to prevent the child from placing the thumb in the palate or they may have loops or spurs to remind the patient to not put their thumb in their mouth. Some appliances have beads to serve as a nonthreatening reminder approach. Typically the habit will decrease in the first two weeks, but the device may be left for six – eight months to ensure the habit is stopped. In addition to cost, these appliances do have possible negative sequella including possible irritation to the tongue and intraoral mucosa, plaque accumulation and potential for injury through distortion. These appliances are not indicated in a child who does not want to stop the habit – they typically will start a new habit, begin behaviors that will make the parent request appliance removal or attempt to damage or remove the appliance themselves.

Many parents approach a dentist for these appliances feeling this will be the easiest and surest way to stop the habit or the only way their child will quit. The vast majority of habits can be stopped with counseling and rewards at little to no cost and without the negative side effects associated with appliance therapy as long as the parents engage appropriately. The introduction of an appliance for a child not ready to quit or without the supportive environment to quit can be an ordeal for the parent, child and dentist. It is helpful if medical professionals provide this reassurance to parents, as well as the dentist, so they can better understand their options.

## PACIFIER HABIT

The use of pacifiers has been discussed in the medical literature in regard to SIDS, breastfeeding impact and infection. From an oral habit that affects the dentition standpoint, pacifiers are often looked at as the lesser of two evils because they can be taken away. However, a pacifier habit can contribute substantially to a malocclusion; pacifier habits that persist for 48 months or more are significantly related to the presence of an anterior open bite or a class II malocclusion. Children who suck pacifiers are significantly more likely to have an overjet greater than 4 mm and a posterior cross bite. Longer use is associated with an anterior open bite and a posterior cross bite. Anatomical or functional pacifiers that mimic the shape of the nipple have been marketed as a way to reduce the orthodontic consequences of pacifier use. However functional pacifiers can cause similar malocclusions than conventional pacifiers.

There is significantly less literature regarding cessation of the pacifier versus a digit habit. Children, especially older children, need emotional support as they break this habit, and it should not be attempted in a time of emotional turmoil. Typically children do not adopt a thumb habit when the pacifier is taken away.

## CONCLUSION

Consistent anticipatory guidance from the medical and dental team can help parents encourage the cessation of non-nutritive sucking habits by age 36 months in a child-friendly manner. This is among many of the topics discussed at the age one dental visit. With appropriate knowledge this source of malocclusion can be prevented.

## REFERENCES

1. American Academy of Pediatric Dentistry. Guideline on management of the developing dentition and occlusion in pediatric dentistry. *Pediatr Dent* 2012;30(suppl) 239-251.
2. Warren JJ, Levy SM, Nowak AJ, Tang Shenghui. Non-nutritive sucking behaviors in preschool children: a longitudinal study. *Pediatr Dent* 2000;22:187-191.
3. Warren JJ, Slayton RL, Yonezu T, Bishara SE, Levy S, Kanellis MJ. Effects of nonnutritive sucking habits on occlusal characteristics in the mixed dentition. *Pediatr Dent* 2005;27:445-450.
4. Christensen JR, Fields HW, Adair SM. Oral Habits. In Casamassimo PS, Fields HW, McTigue DJ, Nowak AJ, eds. *Pediatric Dentistry: Infancy through adolescence*. 5th ed. St. Louis, Mo: Elsevier Saunders;2013:385-392.
5. Bell RA, Dean JA, McDonald RE, Avery DR. Managing the Developing Occlusion. In. Dean JA, Avery DR, McDonald RD, eds. *Dentistry for the Child and Adolescent*. 9th ed. Maryland Heights, Mo: Mosby; 2011:572-578.
6. Adair SM. The Ace™ Bandage approach to digit-sucking habits. *Pediatr Dent* 1999;21:451-453.
7. Adair SM, Milano M, Lorenzo I, Russell C. Effects of current and former pacifier use on the dentition of 24 to 50 month old children. *Pediatr Dent* 17:1998: 437-444.





## Special Children's Dental Clinic at Children's Hospital

Pediatric dentistry is an age-defined specialty that provides both primary and specialty comprehensive preventive and therapeutic oral healthcare for infants and children through adolescence, including those with special healthcare needs. This specialty emphasizes the prevention and interception of oral diseases through early intervention and comprehensive preventive practices.

### Children with Special Healthcare Needs

Children's Hospital partners with the Department of Pediatric Dentistry at the LSUHSC School of Dentistry to offer dental services to our patients. Our doctors work in consultation with other medical specialists in order to provide oral healthcare for children who have special healthcare needs, such as complex medical problems, behavioral problems and developmental problems.

### Services Provided

The services provided include:

- comprehensive oral examinations, professional teeth cleanings, radiographs and professional fluoride applications,
- sealants (a protective layer of resin on the grooves of teeth to prevent decay),
- dental restorations (white fillings, silver fillings, white caps, silver caps),
- pulp therapy (management of pain in the nerves of the teeth),

- space maintainers (to hold space for permanent teeth if baby teeth are taken out early),
- interceptive orthodontics and guidance of eruption (early and selective management of dental crowding or spacing problems in children so that permanent teeth erupt in a more favorable and esthetic position),
- diagnosis and management and/or referral for pathologic lesions in the mouths of children,
- management of trauma to primary (baby) and permanent teeth,
- interdepartmental care coordination with other specialties of dentistry on a case by case basis

### Who Provides the Care

Our doctors are LSU Dental School faculty and first- and second-year residents, who are already licensed dentists who provide state-of-the-art dental care at Children's Hospital's main campus. Due to our residents' motivation and interest in specializing in dental care for children, they choose to continue their education in the specialty of pediatric dentistry. They always treat children under the close supervision of dental school faculty members.

Patients benefit from an environment where education, research and patient care collectively come together, and where innovation, learning and best practices are the norm. Faculty are able to stay abreast of the latest techniques in dental care, learn about recent research breakthroughs and technological

advancements in dentistry, and enjoy the opportunity to easily consult with colleagues and specialists on difficult cases. General dentists and specialists are available to provide care.

### Patient Safety

It is natural for children to feel apprehension and even exhibit uncooperative behavior for a dental appointment, and our doctors and staff members make every effort to provide care for children in a compassionate and friendly manner. The doctors use advanced behavior management techniques to help children better tolerate the dental care provided. These techniques include:

- **Tell-Show-Do:** The dentist or assistant explains to the child what is to be done, shows an example on a tooth model or the child's finger and then the procedure is done to the child's tooth.
- **Positive Reinforcement:** Rewards the child who displays cooperative behavior with compliments, praise, a pat on the shoulder or a small prize.
- **Voice Control:** The attention of the disruptive child is redirected by a change in the tone and volume of the dentist's voice.
- **Mouth Props:** A device is placed in the child's mouth to prevent closure of the child's teeth on dental equipment.
- **Hand and/or head holding:** An adult (dentist, dental assistant, or parent) keeps a child's body still so the child cannot grab the dentist's hand or sharp dental tools. This is to ensure patient safety.
- **Medical Immobilization:** The child is placed in a restraining device made of cloth and hook and loop fasteners. This is to ensure that the child does not hurt himself/herself by his/her movements.
- **Nitrous Oxide Sedation:** Nitrous oxide ("laughing gas") is a medication breathed through a nose mask to relax a nervous child and enable him/her to better tolerate dental treatment. The child will remain awake but is expected to be relaxed and calm. The nitrous oxide is breathed out of the child's body within a few minutes of being turned off. We recommend an adult hold the child's hand as they leave the clinic.
- **Oral Sedation:** Sedative drugs may be recommended to help your child receive quality dentistry in a safe manner if other behavior management techniques do not work.
- **General Anesthesia:** The dentist performs the dental treatment with the child anesthetized in the hospital operating room at Children's Hospital.

### Treatment Fees

The Department of Pediatric Dentistry accepts Bayou Health (Louisiana Medicaid) and Louisiana Children's Health Insurance Program (LaCHIP). No additional fees are required to be paid for procedures that are covered by Louisiana Medicaid. However, if the child needs other services, the fees for those services will be identified. We do not accept any other type of dental insurance, and fees for the services provided are expected to be paid in full at the end of each appointment.

If the child is part of Children's Healthcare Assistance Plan

(CHAP) through Children's Hospital, the parent will need to bring a Tooth Bus referral form to the Special Children's Dental Clinic.

### Become a Patient

The Department of Pediatric Dentistry accepts new patients all year, and there is no additional screening required to become a patient. If you are a referring dentist, please fax referral forms to (504) 896-1418.

If your patient family would like for the child to be seen at our Special Children's Dental Clinic located inside Children's Hospital (Uptown New Orleans), please have them call (504) 896-1337 or (504) 896-1338 to make an appointment, or they may e-mail their name, the child's name, age and contact phone number to [pedodent-ch@lsuhsc.edu](mailto:pedodent-ch@lsuhsc.edu).

If the patient family would like for the child to be seen at our LSU Dental School location, please have them call (504) 941-8201. To request an appointment by email, they may send their name, child's name, age and contact phone number to [pedodent@lsuhsc.edu](mailto:pedodent@lsuhsc.edu).

## Special Children's Dental Clinic at Children's Hospital

### Location

200 Henry Clay Avenue, Suite 2103  
New Orleans, La. 70118

### Hours

Monday – Friday  
8 a.m. – Noon; 1 p.m. – 4:30 p.m.

## Pediatric Dentistry Faculty Providers

### Full Time Faculty

Rosalynn McKendall-Crawford, DDS  
Vincent Liberto, DDS  
Priyanshi Ritwik, DDS  
Janice Townsend, DDS

### Part Time Faculty

Kellie Axelrad, DDS  
Victor Babin, DDS  
Nicole Boxberger, DDS  
Linda Cao, DDS  
Claudia Cavallino, DDS  
Laura Hogue, DDS  
Stephen Holmes, DDS  
Robert Musselman, DDS  
Richard Olinde, DDS  
Pamela Shaw, DDS



# Children's Hospital Specialty Clinics & Therapies

CLINICS IN NEW ORLEANS, METAIRIE, BATON ROUGE AND LAFAYETTE

## Allergy/Immunology

Dimitriades, Victoria <sup>(M, BR)</sup> (504) 896-9589  
Ochoa, Augusto <sup>(M)</sup> (504) 896-9589  
Paris, Ken <sup>(M, L)</sup> (504) 896-9589  
Sorensen, Ricardo <sup>(M)</sup> (504) 896-9589

## Amputee Clinic

Gonzales, Tony (504) 896-9569

## Cardiology

Ascuitto, Robert (504) 896-9751  
Gajewski, Kelly (504) 896-9751  
Lilje, Christian (504) 896-9751  
Ross-Ascuitto, Nancy (504) 896-9751  
Sernich, Steffan (504) 896-9751  
Siwik, Ernest (504) 896-9751  
Stopa, Aluizio (504) 896-9751

## Cardiothoracic Surgery

Caspi, Joseph (504) 896-3928  
Dorotan, Jaime (504) 896-3928  
Pettitt, Timothy (504) 896-3928

## Children at Risk Evaluation (CARE) Center

Jackson, Jamie (504) 896-9237  
Mehta, Neha (504) 896-9237  
Wetsman, Ellie (504) 896-9237

## Cleft/Craniofacial

McBride, Lori (504) 896-9568  
Moses, Michael (504) 896-9857  
St. Hilaire, Hugo (504) 896-9857

## Clinical Trials

## Cochlear Implants

Arriaga, Moises (504) 896-2141  
Jeyakumar, Anita (504) 896-9254

## Craniofacial/Genetics

Lacassie, Yves <sup>(M)</sup> (504) 896-9857  
Marble, Michael (504) 896-9857  
Zambrano, Regina (504) 896-9857

## Cystic Fibrosis

Levine, Stephen (504) 896-9436  
Pepiak, Derek (504) 896-9436

## Dental

Mobile Dental Program 34-BRUSH  
Ritwik, Priyanshi (504) 896-9580

## Dermatology

Poole, Jeffrey (504) 896-2888  
Wiltz, Katy (504) 896-2888

## Developmental/High Risk

Wong, Joaquin (504) 896-9458

## Diabetes

Chalew, Stuart (504) 896-9441  
Genet, Michelle <sup>(BR)</sup> (504) 896-9441  
Gomez, Ricardo (504) 896-9441  
Stender, Sara (504) 896-9441  
Vargas, Alfonso (504) 896-9441

## Down Syndrome

Lacassie, Yves <sup>(M)</sup> (504) 896-9254  
Marble, Michael (504) 896-9254  
Zambrano, Regina (504) 896-9254

## Endocrinology

Chalew, Stuart (504) 896-2888  
Felipe, Dania (504) 896-2888  
Genet, Michelle <sup>(BR)</sup> (504) 896-2888  
Gomez, Ricardo <sup>(M, BR)</sup> (504) 896-2888  
Stender, Sara (504) 896-2888  
Vargas, Alfonso <sup>(M, BR)</sup> (504) 896-2888

## Epilepsy Surgery

McGuire, Shannon (504) 896-9458

## Feeding Clinic

Hyman, Paul (504) 896-9534

## Gastroenterology

Brown, Raynorda <sup>(M, BR)</sup> (504) 896-2888  
Hyman, Paul (504) 896-2888  
Keith, Brent (504) 896-2888  
Monagas, Javier <sup>(M)</sup> (504) 896-2888  
Noel, Adam <sup>(M)</sup> (504) 896-2888  
Rosenberg, Allan <sup>(M, BR)</sup> (504) 896-2888

## Genetics

Lacassie, Yves <sup>(M)</sup> (504) 896-9254  
Marble, Michael <sup>(BR, L)</sup> (504) 896-9254  
Zambrano, Regina <sup>(M, BR)</sup> (504) 896-9254

## Gynecology

Holman, Stacey (504) 896-2888  
Wells, Lindsay (504) 896-2888

## Hematology/Oncology

Gardner, Renee (504) 896-9740  
Morales, Jaime <sup>(BR, L)</sup> (504) 896-9740  
Morrison, Cori (504) 896-9740  
Prasad, Pinki <sup>(L)</sup> (504) 896-9740  
Ramos, Ofelia (504) 896-9740  
Velez, Maria <sup>(BR)</sup> (504) 896-9740  
Yu, Lolie <sup>(L)</sup> (504) 896-9740

## Hemophilia Clinic

Morales, Jaime (504) 896-9740  
Velez, Maria (504) 896-9740

## HIV Clinic/FACES

Wilcox, Ronald (504) 896-9583

## Hospitalists

Referrals (504) 896-3924  
English, Robin (504) 896-3924  
Hescock, Jay (504) 896-3924  
Roy, Melissa (504) 896-3924  
Sulton-Villavasso, Carmen (504) 896-3924

## Infectious Disease

Bégué, Rodolfo (504) 896-9583  
Seybolt, Lorna (504) 896-9583  
Wilcox, Ronald (504) 896-9583

## International Adoption Clinic

Bégué, Rodolfo (504) 896-9583

## Kidney Transplant

Buell, Joseph (504) 896-9238  
Killackey, Mary (504) 896-9238  
Paramesh, Anil (504) 896-9238  
Slakey, Douglas (504) 896-9238

## Kidney Transplant Clinic

Vehaskari, Matti (504) 896-9238

## Metabolic

Marble, Michael (504) 896-9254  
Zambrano, Regina (504) 896-9254

## Muscular Dystrophy

Tilton, Ann (504) 896-9283  
Weimer, Maria (504) 896-9283  
Wong, Joaquin (504) 896-9283

## Nephrology

Aviles, Diego <sup>(BR)</sup> (504) 896-9238  
Bangbola, Oluwatoyin <sup>(L)</sup> (504) 896-9238  
Iorember, Franca (504) 896-9238  
Vehaskari, Matti <sup>(BR, L)</sup> (504) 896-9238

## Neurofibromatosis

Lacassie, Yves (504) 896-9254  
Marble, Michael (504) 896-9254  
Zambrano, Regina (504) 896-9254

## Neurology

Conravey, Allison <sup>(M)</sup> (504) 896-2888  
Deputy, Stephen (504) 896-2888  
Gautreaux, Jessica <sup>(M)</sup> (504) 896-2888  
Luke, Wendi NP (504) 896-2888  
McGuire, Shannon (504) 896-2888  
Tilton, Ann (504) 896-2888  
Weimer, Maria (504) 896-2888  
Wong, Joaquin (504) 896-2888

## Neuromuscular

Gonzales, Tony (504) 896-9569  
Levine, Stephen (504) 896-9436  
Tilton, Ann (504) 896-9319  
Weimer, Maria (504) 896-9859  
Wong, Joaquin (504) 896-9283

## Neurosurgery

Greene, Clarence <sup>(L)</sup> (504) 896-9568  
McBride, Lori (504) 896-9568  
Nadell, Joseph <sup>(L)</sup> (504) 896-9568  
Occupational Therapy (504) 896-9540

## Ophthalmology

Ellis, George, Jr. <sup>(M)</sup> (504) 896-9426  
Eustis, Sprague (504) 896-9426  
Leon, Alejandro <sup>(M)</sup> (504) 896-9426  
Vives, Tere <sup>(M)</sup> (504) 896-2134

## Orthopaedics

Accousti, William <sup>(M, L)</sup> (504) 896-9569  
Chavez, Manuel, PA (504) 896-9569  
Faust, Donald (504) 896-2888

Gonzales, Tony <sup>(BR)</sup> (504) 896-9569  
Heinrich, Stephen (504) 896-9569  
King, Andrew (504) 896-9569  
Lago, Theresa, PA (504) 896-9569  
Lee, Raven, PA (504) 896-9569  
Nguyen, Jessica, PA (504) 896-9569  
Patel, Prerana (504) 896-9569  
Southern, Edward (504) 896-9569

## Otolaryngology (ENT)

Arriaga, Moises (504) 896-9254  
Hagmann, Michael <sup>(M)</sup> (504) 896-9254  
Jeyakumar, Anita (504) 896-9254  
Simon, Lawrence (504) 896-9254

## Physical Therapy

## Plastic Surgery

Moses, Michael (504) 895-7200  
St. Hilaire, Hugo (504) 412-1240

## Psychology

Boggs, Koren (504) 896-7272  
Franz, Diane (504) 896-9484  
Gentile, Steven (504) 896-7272  
Henke, Amy (504) 896-7272  
Heslet, Lynette (504) 896-7272  
Jackson, David (504) 896-7272  
Kamps, Jodi (504) 896-7272  
Kiracofe, Catherine (504) 896-7272  
Rothbaum, Rebecca (504) 896-9484

## Pulmonology

Edell, Dean (504) 896-9436  
Levine, Stephen (504) 896-9438  
Pepiak, Derek (504) 896-9438

## Rheumatology

Brown, Amanda <sup>(BR, L)</sup> (504) 896-9385  
Dimitriades, Victoria (504) 896-9385  
Gedalia, Abraham <sup>(M, BR, L)</sup> (504) 896-9385

## Scoliosis/Pediatric Spine

Accousti, William <sup>(M, L)</sup> (504) 896-9569  
Gonzales, Tony <sup>(BR)</sup> (504) 896-9569  
King, Andrew (504) 896-9569  
Patel, Prerana (504) 896-9569

## Spasticity

Nadell, Joseph (504) 896-9568  
Tilton, Ann (504) 896-9283  
Wong, Joaquin (504) 896-9283

## Speech & Hearing

## Surgery

Hill, Charles (504) 896-3977  
Steiner, Rodney (504) 896-9756  
Valerie, Evans (504) 896-9756

## Travel Clinic

Bégué, Rodolfo (504) 896-9583  
Seybolt, Lorna (504) 896-9583  
Wilcox, Ronald (504) 896-9583

## Treatment after Cancer & Late Effects Center

Prasad, Pinki (504) 896-9740

## Urology

Langston, Sherry, CNP (504) 896-2888  
Ortenberg, Joseph <sup>(BR, L)</sup> (504) 896-2888  
Roth, Christopher (504) 896-2888

## Vascular Anomalies

Poole, Jeffrey (504) 896-9857  
Shehan, Claudia (504) 896-9857  
Simon, Lawrence (504) 896-9857  
St. Hilaire, Hugo (504) 896-9857

## Wound Clinic

Valerie, Evans (504) 896-3977

## TRANSPORT/TRANSFER



1-855-CHNOLA1

200 Henry Clay Ave., New Orleans, LA 70118  
(504) 899-9511 • www.chnola.org

In addition to Children's Hospital Main Campus, some physicians also hold clinics at other centers.

Children's Hospital (504) 899-9511  
Ambulatory Care Center (504) 896-9532  
Metairie Center <sup>(M)</sup> (504) 832-4033  
Baton Rouge Center <sup>(BR)</sup> (225) 216-3047  
Lafayette Center <sup>(L)</sup> (337) 289-8289

Updated 1/13

## ARTICLE EVALUATION

**You must complete the following evaluation in order to receive your CME credit.**

I enhanced my knowledge of the topic:

Very much				Very little
5	4	3	2	1

The author met the stated objectives:

Greatly				Not at all
5	4	3	2	1

The overall evaluation of the article:

Excellent				Poor
5	4	3	2	1

Did you receive any commercial bias in the material presented in this activity?

☐ Yes ☐ No

How long did it take to read the issue and complete the quiz:

30 minutes      1 hour

## CONTINUING MEDICAL EDUCATION

Children's Hospital is accredited by the Louisiana State Medical Society to provide continuing medical education for physicians. Children's Hospital designates this enduring material educational activity for a maximum of **1.0 AMA PRA Category 1 Credit™**. Physicians should only claim credit commensurate with the extent of their participation in the activity. Please PRINT your personal information.



Name: \_\_\_\_\_

Physician ID number or last four SSN digits: \_\_\_\_\_

Mailing address: \_\_\_\_\_

Topics that you would like to see in future issues: \_\_\_\_\_

## CME Offerings

### Pediatric Grand Rounds

1st, 3rd and 5th Wednesday  
of each month, 8 – 9 a.m.  
Children's Hospital Auditorium

### Child Neurology Case Conference

1st, 2nd and 4th Wednesday  
of each month, 2 – 3 p.m.  
ACC Room 3302

### Tumor Board

Wednesdays, 4 – 5 p.m.  
Children's Hospital Auditorium

### Weekly Pathology Conference

Thursdays, 8 – 9 a.m.  
Research Center, Room 4222

### Neonatology Conference

Thursdays, 12:30 – 1:30 p.m.  
NICU Conference Room

### Cath Conference

Fridays, 8 – 9 a.m.  
ACC Room 3302

**Please call the CME office  
at (504) 896-9264  
for more information.**

Please record your responses to the questions on the form below. Please circle the best possible answer. CME offer is good until May 31, 2013.

- At what age should nonnutritive sucking habits be stopped?
  - when the first primary tooth erupts
  - age 5
  - 36 months
  - when the first permanent tooth erupts
- Adjunctive therapy with a habit reminder appliance is required for the school age child to stop a digit habit.
  - True
  - False
- Which is true regarding thumb habits?
  - digit sucking will always result in an open bite
  - dental effects are determined by duration, intensity, and frequency
  - digit habits are protective against SIDS
  - digit habits may make children less prone to trauma

**To receive CME credit, participants must score 100%.**

To receive CME credit, mail, e-mail or fax your completed form to:

CME Office • Children's Hospital • 200 Henry Clay Avenue • New Orleans, LA 70118

E-mail: cmooney@chnola.org • Fax: (504) 896-3932